

CLAIMS

We claim:

5 1. A storage compartment equipped with a light emitting diode (LED) light source for illuminating contents inside the compartment,

the LED light source comprising a LED light engine outside the compartment and a light guide inside the
10 compartment, the light guide being optically coupled to be LED light engine for bringing light illumination from the LED light engine into the compartment via the light guide.

2. The storage compartment of claim 1, in which
15 output of the LED light engine is controllable to vary intensity of the illumination inside the compartment.

3. The storage compartment of claim 1, the LED
light engine including a plurality of different colors of LEDs
20 that contribute to the illumination inside the compartment.

4. The storage compartment of claim 3, the plurality of different colors including first, second, and third colors.

5 5. The storage compartment of claim 4, wherein the first, second, and third colors are red, green, and blue, respectively.

6. The storage compartment of claim 4, in which
10 respective outputs of the first, second, and third color LEDs are separately controllable to allow a variably controlled color point of the illumination inside the compartment.

7. The storage compartment of claim 6, in which
15 total output of the first, second, and third color LEDs is controllable to vary intensity of the illumination inside the compartment.

8. The storage compartment of claim 4, in which
20 total output of the first, second, and third color LEDs is controllable to vary intensity of the illumination inside the compartment.

9. A method for illuminating frozen foods in a freezer cabinets, comprising:

providing a freezer cabinet with an externally mounted LED light engine,

5 providing the freezer cabinet with a light guide extending inside the cabinet,

optically coupling the LED light engine to the light guide, and

operating the LED light engine such that light is
10 passed via the light guide into the interior of the cabinet to provide interior cabinet illumination at a first steady light level.

10. The method of claim 9, including varying output
15 of the LED light engine to provide interior cabinet illumination at a second steady light level different from the first light level.

11. The method of claim 9, including providing the
20 LED light engine with a plurality of different colors of LEDs that contribute to the illumination inside the compartment.

12. The method of claim 11, the plurality of different colors including first, second, and third colors.

13. The method of claim 12, with the first, second,
5 and third colors are red, green, and blue, respectively.

14. The method of claim 12, including varying
respective outputs of the first, second, and third color LEDs
to control color point of the illumination inside the
10 compartment.

15. The method of claim 14, including providing at
least one feedback sensor in at least one of the light engine
and the cabinet, and controlling the color point of the
15 illumination based on a signal received from the at least one
feedback sensor.

16. The method of claim 15, wherein the feedback
sensor senses color of contents of the cabinet and the color
20 point of the illumination is changed automatically depending
on the color of the contents of the cabinet.

17. The method of claim 14, including providing a user interface, and controlling the color point of the illumination based on a signal received from the user interface.

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18. The method of claim 14, including varying total output of the first, second, and third color LEDs to vary total intensity of the illumination inside the compartment.

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19. The method of claim 12, including varying total output of the first, second, and third color LEDs to vary total intensity of the illumination inside the compartment.